

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 27592 5/18/2001]

[Docket No. 2001-NE-05-AD; Amendment 39-12233; AD 2001-10-07]

RIN 2120-AA64

Airworthiness Directives; General Electric Co. CF6-80C2 Turbofan Engines.

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), that is applicable to General Electric Co. (GE) CF6-80C2 turbofan engines with certain stage 1 high pressure turbine (HPT) rotor disks installed. This amendment requires initial and repetitive inspections of certain HPT rotor disks for cracks in the bottom of the dovetail slot. This amendment is prompted by a report of an uncontained failure of an engine during a high-power ground run for maintenance. The actions specified by this AD are intended to detect cracks in the bottoms of the dovetail slots that could propagate to failure of the disk and cause an uncontained engine failure.

DATES: Effective date June 18, 2001. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of June 18, 2001.

ADDRESSES: The service information referenced in this AD may be obtained from General Electric Company via Lockheed Martin Technology Services, 10525 Chester Road, Suite C, Cincinnati, Ohio 45215, telephone (513) 672-8400, fax (513) 672-8422. This information may be examined at the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Ann Mollica, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: (781) 238-7740, fax: (781) 238-7199.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that is applicable to General Electric Co.

(GE) CF6-80C2 turbofan engines with certain stage 1 HPT rotor disks installed was published in the **Federal Register** on March 12, 2001 (66 FR 14348). That action proposed to detect cracks in the bottoms of the dovetail slots that could propagate to failure of the disk and cause an uncontained engine failure.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Include Alert Service Bulletin Revision 1.

One commenter states that Table 1 should reference GE Alert Service Bulletin (ASB) CF6-80C2 72-A1024, Revision 1, dated November 3, 2000, as well as the original ASB issue. The FAA agrees. The inspection requirements in ASB Revision 1 are the equivalent of the inspection requirements of original issue ASB CF6-80C2 72-A1024, dated October 13, 2000. Reference to ASB CF6-80C2 72-A1024, Revision 1 has been added to the final rule.

Change Economic Impact to Reflect Labor Cost for Engines That Are Not Due For HPT Piece-Part Exposure.

Three commenters request that the economic impact include labor costs for engines in the shop, that would otherwise not require HPT piece-part exposure. The commenters state that not all engine shop visits (ESV's) (scheduled or unscheduled) require complete disassembly of the HPT rotor. One commenter states that their inventory has 77 HPT rotor stage 1 disks that will require the inspection proposed in the rule over the next year, and an additional 22 units that will require 24 hours of labor to complete piece-part exposure of the HPT rotor that would otherwise have remained assembled during the shop visit. Another commenter estimated it would cost an additional \$22,000 per year to complete the additional disassembly required to perform the inspections.

The FAA agrees. After considering the information presented by commenters, the FAA revised the subject work hours in the labor cost impact information. The FAA estimates that approximately 75% of all engines introduced into a shop each year will have the HPT at piece-part level. The remaining 25% would require additional work scope to obtain HPT rotor piece-part exposure. The economic impact is revised to include this additional cost.

Change Economic Impact to Reflect Parts and Labor Costs Per Year, Due to “Check & Repair” Engines.

One commenter requests that the economic impact include parts and labor costs per year, for “Check & Repair” engines that would be upgraded to heavy work scopes due to the “Next Shop Visit” provision of the proposed rule. The commenter states that engines, termed as “Check & Repair” engines, which is on-average eight engines per year, would have to be upgraded to heavy work scopes due to the “Next Shop Visit” provision of the proposed rule. The commenter states that this is an additional \$2,000,000 in parts and labor costs per year. The commenter does not provide a breakdown of the total cost, but suggests that the additional exemptions requested to the definition of ESV would minimize the exposure to “Check & Repair” increased work scope.

The FAA partially agrees. The FAA's interpretation of a “Check and Repair” engine is one that is introduced into a shop to address a known problem, with a limited work scope. The commenter did not provide the breakdown in the stated cost for these engines. The FAA has already included two exemptions to the definition of ESV in the notice of proposed rulemaking (NPRM) to lessen the economic impact of these maintenance actions. Any additional exemptions would result in an unacceptable level of safety. Therefore, the FAA made no changes to the rule with respect to this request. However, the economic impact has been revised to include the cost of the additional work scope required by approximately 25% of the engines affected by this AD, that would not have completed HPT rotor piece-part disassembly otherwise, during their ESV.

Change Economic Impact to Include Disk Replacement Cost.

One commenter states that the economic impact in the NPRM did not include the \$283,480 cost of a replacement disk when a disk is found unserviceable.

The FAA disagrees. The economic impact section of the NPRM did, in fact, include the cost of a replacement disk, assuming an annual projected rate of disks found unserviceable during the inspection program.

Clarify Inspection Requirements for Disks with Zero Cycles-Since-New (CSN), At Time of Inspection Using GE ASB CF6-80C2 72-A1024.

One commenter requests that the inspection requirements for disks with zero CSN at the time of inspection and using ASB CF6-80C2 72-A1024, be clarified. The commenter states the NPRM is unclear, but did not supply any supporting data.

The FAA partially agrees. ASB CF6-80C2 72-A1024 was issued as an interim step for engines undergoing HPT overhaul during the development of, and prior to, the implementation of the eddy current inspection (ECI), as introduced in ASB CF6-80C2 72-A1026. Since ASB CF6-80C2 72-A1024 was issued for shop use during HPT overhaul, the FAA expects there are no disks with zero CSN that were inspected per ASB CF6-80C2 72-A1024. The FAA does not consider it necessary to identify disks with zero CSN, in particular with respect to inspection in accordance with ASB CF6-80C2 72-A1024. However, to help clarify disk inspection requirements, the FAA has

changed the inspection requirement of Table 1, row three, to exclude inspection of disks with zero CSN. Furthermore, the intent of the inspections in both ASB CF6-80C2 72-A1024 and ASB CF6-80C2 72-A1026 is to detect cracks in the bottoms of the dovetail slots that have grown during engine service. The propagation occurs during accumulation of disk cycles. Potential cracks have not propagated in unused disks, therefore, inspections of unused disks do not mitigate the risk.

Clarify Inspection Requirements for Disks With Less Than 1,500 CSN.

One commenter states that the NPRM is unclear, and requests clarification of the required inspection for a disk that has less than 1,500 CSN on the effective date of this AD, and is at piece-part condition after the effective date of this AD. The commenter speculates that the average Mean Time Between Shop Visit on the CF6-80C2 engine is less than approximately 3,500 CSN, and in some instances the Mean Time Between Shop Visit is less than 1,000 cycles.

The FAA disagrees that clarification is required. If an HPT stage 1 disk is at piece-part condition, this qualifies as an ESV according to the NPRM. Therefore, the disk satisfies the requirements for Table 1, paragraph 1, and must be inspected. The initial inspection of all disks is required to occur at the next ESV. Also, paragraph (c) of this AD clearly states that after the effective date of this AD, stage 1 HPT rotor disks with greater than zero CSN must not be installed until inspected. If the disk has 1,500 or fewer CSN on the effective date of this AD, this initial inspection must occur at the next ESV, but before the disk usage exceeds 5,000 CSN, regardless of whether or not another shop visit is anticipated before the disk reaches 5,000 CSN. The proposed compliance times of the rule considered ESV rates, while maintaining an acceptable level of safety. In determining the calculated risk levels, the engine shop visit cyclic distribution data was used in the statistical model.

Add Contact Information for Reporting Requirements

Two commenters request that contact information such as telephone number, fax number, address, and e-mail address of the Engine Certification Manager be added to the Reporting Requirements Section of the final rule.

The FAA agrees. The contact information is added to the final rule.

Change “Next Engine Shop Visit” to “Any Engine Shop Visit”.

One commenter requests that the initial inspection be required at any shop visit, not to exceed 3,500 cycles-in-service for used disks, and not to exceed 5,000 CSN for new disks. No substantiating data was included with this comment. The reason for the request was stated as airline operator convenience.

The FAA disagrees. In determining the calculated risk levels, the ESV cyclic distribution data was used in the statistical model. From a calculated risk standpoint, specifying only cycles is not the same as specifying next shop visit not to exceed a certain number of cycles. The initial inspection intervals of next shop visit are based on the risk assessment of the entire fleet. The change requested by the commenter would result in an extension of the inspection intervals. Extensions to the inspection intervals would increase risks to an unacceptable level of safety.

Incorporate Additional Exemptions to Engine Shop Visit.

Four commenters request that paragraph (d)(2) of the Compliance section in the NPRM be changed to add other maintenance actions as exemptions to an ESV, to include the following, individually and in combination:

Introduction of an engine into a shop solely for:

- Removal or replacement of the stage 1 fan disk.
- Replacement of the Turbine Rear Frame.
- Replacement of the Accessory and/or Transfer Gearboxes.
- Replacement of the fan forward case.

One of the four commenters suggests that these proposed exemptions are to address quick turn-time maintenance actions, and that these quick turn-time maintenance actions would otherwise not require HPT rotor piece-part disassembly. Therefore, the commenter suggests that significant additional cost would result if the visits for these maintenance actions were not exempt. In addition, this commenter states that their experience shows the number of engines that fall into the proposed

categories are limited, and therefore, the proposed exemptions for ESV's will have no significant detriment to the level of safety over the program. All four commenters recommend that the addition of these exemptions will be consistent with AD 99-24-15 (CF6 High Pressure Compressor (HPC) stage 3-9 Spool Inspection). One of the four commenters states that these ESV exemptions will minimize the operator's exposure during "Check & Repair" work scope shop visits.

The FAA disagrees that additional ESV exemptions are appropriate for this rule, based on the severity of the potential unsafe condition. As one commenter cited, the FAA finds that the frequency of these proposed shop visit exemptions is very low. While the four commenters request consistency with the existing AD 99-24-15 (HPC stage 3-9 spool inspection), the FAA notes that the most recent HPC stage 3-9 spool inspection, AD 2000-16-12, contains no exemptions from the definition of shop visit. The NPRM allowed two exemptions to the definition of an ESV, while maintaining the necessary level of safety. The FAA made no changes to the rule. In addition, operators can submit a request for an alternate method of compliance or adjustment of the compliance time that provides an acceptable level of safety. The NPRM definition paragraph (d) is now paragraph (e) in this rule.

Incorporate an Additional Exemption in the Definition of Engine Shop Visit.

One commenter requests an additional exemption in the definition of ESV to include a maintenance action that will result in removal of the compressor stator lower case, without need to separate any other major flanges. The commenter has a single engine scheduled for removal for the HPC 3-9 spool inspection. During the shop visit, removal of the compressor stator lower case may arise to replace bushings. The commenter developed an approved method to remove the lower case after reinstalling the top case while the engine is in a horizontal position, without separating any major flanges.

The FAA disagrees. This was the only request of this kind. As the rule is intended to cover the entire fleet, the FAA does not want to revise the AD based on one engine. For unique situations, operators can submit a request for an alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety. Therefore, the FAA made no changes to the rule.

Add a Row to Table 1 for Disks Already Inspected Per GE ASB CF6-80C2 72-A1026.

One commenter requests that a row be added to Table 1 for disks already inspected in accordance with GE ASB CF6-80C2 72-A1026 before the effective date of this AD. The added row would state a compliance time of "any number of CSN if the disk has been inspected using ASB CF6-80C2 72-A1026, dated January 17, 2001, before the effective date of this AD", with an initial inspection that is "not applicable", and a repetitive inspection that is "at each piece-part exposure". The commenter provides no substantiating data.

The FAA partially agrees. The FAA has been informed that approximately 20 disks from US operators have been inspected in accordance with ASB CF6-80C2 72-A1026, dated January 17, 2001, since that ASB's issuance. These disks have significant cycles-since-new, and do not require another inspection until next piece-part exposure. Therefore, Table 1 remains as-written and a paragraph has been added to the compliance section stating that, for a stage 1 HPT rotor disk that has been inspected in accordance with 3.A(1) through 3.C.(10)(i) of the Accomplishment Instructions of GE Alert Service Bulletin (ASB) CF6-80C2 72-A1026, dated January 17, 2001, before the effective date of this AD, and had greater than zero cycles-since-new (CSN) at the time of inspection, inspect the disk at each piece-part exposure, and replace as necessary. In addition, operators can submit a request for an alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety.

Option to Perform Initial Inspection for Zero Cycle Disks.

One commenter requests an option to perform ASB CF6-80C2 72-A1026, dated January 17, 2001, for zero cycle disks prior to installation. The commenter does not provide technical justification. The commenter states that since GE does not offer an HPT stage 1 disk that is not affected by the proposed AD, all first-run engines and engines in which zero cycle disks are or will be installed, will be limited to 5,000 CSN. Because the inspections cannot be performed on-wing or at

engine-level, the proposed rule will cause forced-engine removals and disassembly of the HPT for short range applications.

The FAA disagrees. The intent of the inspection is to detect cracks in the bottoms of the dovetail slots that have grown during engine cyclic service. The propagation occurs during accumulation of disk cycles. Potential cracks have not propagated in unused disks, therefore, inspections of unused disks do not mitigate the risk. The greater the number of cycles accumulated, the greater the risk for fatigue-induced failure. Therefore, short haul operators or operators with fleets that accumulate a large number of cycles per year are more significantly at risk of disk failure.

Change Initial Inspection Threshold, Paragraph 1, of Table 1, for Disks With 1,500 or Fewer CSN.

One commenter requests a change in Table 1, paragraph (1), for disks with 1,500 or fewer CSN on the effective date of the AD, to change the initial inspection threshold from “not to exceed 5,000 CSN” to “not to exceed 5,000 CSN or 10,000 hours time-since-new, whichever comes later.” The commenter provided no technical substantiation. The commenter states that since all HPT stage 1 disks are affected by the proposed AD, and the inspections cannot be performed on-wing or at engine level, short range applications will cause forced-engine removals.

The FAA disagrees. Specifying hours-since-new does not address the cyclic nature of the crack propagation. The intent of the inspection is to detect cracks in the bottoms of the dovetail slots that have propagated during engine cyclic service. Because the propagation is related to low-cycle fatigue, the propagation occurs during accumulation of disk cycles. The greater the number of cycles accumulated, the greater the risk for fatigue-induced failure. Therefore, short haul operators or operators with fleets that accumulate a large number of cycles per year are more significantly at risk of disk failure. Inspections according to the compliance times in this rule will maintain an acceptable level of safety. Therefore, the FAA made no changes to the rule.

Review Initial Eddy Current Inspection Data.

Two commenters request that the “Next Shop Visit” accomplishment schedule be reviewed by the FAA, GE, and the airlines, after substantial data has been collected from the initial eddy current inspections. The commenters note that each data point referenced in the discussion of the proposed rule refers to crack initiation due to handling damage. The commenters believe a timely review of the expanded data set resulting from the inspection program is necessary to confirm the proposed schedule ensures safety without placing an unwarranted burden on the operators.

The FAA partially agrees. The FAA considers this rule to be an interim action. A timely review of the expanded data set resulting from the inspection program is appropriate. Additional inspection results will be considered to ensure that the actions and schedule provide an acceptable level of safety. While the rule requires that inspection rejects be reported to the FAA, it is recommended that operators comply with GE’s request for all inspection results be sent to GE, regardless of pass or failure of the inspection. All data, including successes and failures, will be analyzed to evaluate the safety level, and risk of a future event. The subject of handling damage will be discussed in the next response.

Initial Inspection Exemption for New Disks Installed in Engines Since New.

Two commenters request that the hard time limits for initial inspections in Table 1, items 1 and 2, should not apply to new disks which have been installed in engines since new. The commenters reason that because new disks have not been repaired or handled, this should preclude the disks from incurring the damage referenced in the proposed rule.

The FAA disagrees. It is possible to incur damage during any handling of the disk, such as during part manufacture, engine assembly, engine disassembly, and during engine overhaul. Recent data on a disk previously rejected by an overhaul shop for a fluorescent-penetrant inspection indication at a slot end broaching burr that had not been completely removed at manufacturing, was destructively evaluated. This burr was associated with a crack, which extended into the slot aft corner. The crack had not propagated from fatigue. While this disk did not have cracking in the slot bottom corner, this finding suggests that it is possible for a disk to have a manufactured burr-related

crack as a potential root cause for this series of events. Based on this data, the FAA made no changes to the rule.

Change to Definition of Piece-Part Exposure.

The FAA has also changed the definition of piece-part exposure in paragraph (e) of the final rule. The proposal provided that a piece-part exposure would be achieved by a complete disassembly performed in accordance with the engine manufacturer's manual. It is possible that some operators may disassemble the HPT rotor disk using their own manual. Therefore, to make clear that a complete disassembly performed in accordance with an FAA-approved manual other than the manual published by the engine manufacturer, would constitute a piece-part exposure of the HPT rotor disk, the FAA has added the phrase "or other FAA-approved" to paragraph (e)(1)(i) of the final rule.

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes described previously. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Economic Impact

There are approximately 2,954 engines of the affected design in the worldwide fleet. The FAA estimates that 637 engines installed on aircraft of U.S. registry will be affected by this AD. The FAA estimates that it will take approximately three work hours per engine to accomplish the required actions, and the average labor rate is \$60 per work hour. Required parts will cost approximately \$283,480 per engine. The FAA also estimates that approximately 191 engines per year will have shop visits, and that of those 191 engines, approximately two disks per year will have to be replaced. Also, based on information provided by NPRM commenters to the FAA, approximately 48 (25%) of the shop visits will require additional work scope because they would not otherwise have required HPT rotor piece-part disassembly. The FAA estimates it will take approximately 50 work hours per engine to accomplish the required additional work scope actions, and the average labor rate is \$60 per work hour. Based on these figures, the total additional work scope labor cost will be approximately \$144,000. Based on all of these figures, the total cost impact of the proposed AD on U.S. operators is estimated to be \$745,340 per year.

Regulatory Impact

This final rule does not have federalism implications, as defined in Executive Order 13132, because it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Accordingly, the FAA has not consulted with state authorities prior to publication of this final rule.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2001-10-07 General Electric Co.: Amendment 39-12233. Docket No. 2001-NE-05-AD.

Applicability

This airworthiness directive (AD) is applicable to General Electric Company (GE) CF6-80C2 series turbofan engines with stage 1 high pressure turbine (HPT) rotor disks, part numbers (P/N's) 1531M84G02, 1531M84G06, 1531M84G08, 1531M84G10, 9392M23G10, 9392M23G12, 9392M23G21, and 1862M23G01 installed. These engines are installed on, but not limited to Airbus Industrie A300 and A310 series, Boeing 747 and 767 series, and McDonnell Douglas MD-11 series airplanes.

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Compliance with this AD is required as indicated below, unless already done.

To detect cracks in the bottoms of the dovetail slots that could propagate to failure of the disk and cause an uncontained engine failure, perform the following inspections:

(a) For stage 1 HPT rotor disks that have been inspected prior to the effective date of this AD, in accordance with 3.A(1) through 3.C.(10)(i) of the Accomplishment Instructions of GE Alert Service Bulletin (ASB) CF6-80C2 72-A1026, dated January 17, 2001, and had greater than zero cycles-since-new (CSN) at the time of inspection, inspect the disk at each piece-part exposure, and replace as necessary.

(b) For stage 1 HPT rotor disks not previously inspected, inspect the disk in accordance with 3.A.(1) through 3.C.(10)(i) of the Accomplishment Instructions of GE ASB CF6-80C2 72-A1026, dated January 17, 2001, and Table 1 of this AD, and replace if necessary, as follows:

Table 1. Compliance Times for Stage 1 HPT Rotor Disk Inspections.

Stage 1 HPT Rotor Disk Cycles-since-new (CSN) on the Effective Date of This AD	Initial Inspection	Repetitive Inspections
(1) 1,500 CSN or fewer.	At the next engine shop visit (ESV) after the effective date of this AD, but not to exceed 5,000 CSN.	At each piece-part exposure.
(2) More than 1,500 CSN.	At the next ESV after the effective date of this AD, but not to exceed 3,500 cycles-in-service (CIS) after the effective date of this AD.	At each piece-part exposure.
(3) Any number of CSN if the disk has been inspected using ASB CF6-80C2 72-A1024, Revision 1, dated November 3, 2000, or original ASB issue, dated October 13, 2000, before the effective date of this AD, and, if the disk had greater than zero CSN at the time of inspection.	At the next ESV after the effective date of this AD.	At each piece-part exposure.

(c) After the effective date of this AD, do not install any stage 1 HPT rotor disk with greater than zero CSN until it has been inspected in accordance with 3.A.(1) through 3.C.(10)(i) of the Accomplishment Instructions of GE ASB CF6-80C2 72-A1026, dated January 17, 2001.

(d) Thereafter, inspect the disk at each piece-part exposure, and replace if necessary.

Definitions

(e) The following definitions apply for this AD:

(1) Piece-part exposure means the stage 1 HPT rotor disk is considered completely disassembled as follows:

(i) When done in accordance with the disassembly instructions in the engine manufacturer's, or other FAA-approved engine manual, AND

(ii) The disk has accumulated more than 100 CIS since the last piece-part opportunity inspection, if the disk was not damaged or related to the cause for its removal from the engine.

(2) An ESV is defined as the induction of an engine into a shop where the separation of a major engine flange will occur after the effective date of this AD. The following actions, either separately or in combination, are not considered ESV's for the purpose of this AD:

(i) Induction of an engine into a shop solely for removal of the upper compressor stator case for airfoil maintenance.

(ii) Induction of an engine into a shop solely for the module level inspection of the high pressure compressor rotor 3-9 spool.

Reporting Requirements

(f) Report the results of inspections on all disks that equal or exceed the reject criteria of GE ASB CF6-80C2 72-A1026, dated January 17, 2001, within 5 calendar days of the inspection, to the Manager, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: (781) 238-7140; fax: (781) 238-7199. Reporting requirements have been approved by the Office of Management and Budget and assigned OMB control number 2120-0056. The following information must be included in the report:

- (1) Engine model in which the stage 1 HPT rotor disk was installed, AND
- (2) Disk P/N, AND
- (3) Disk serial number, AND
- (4) CSN on the disk, AND
- (5) Cycles-since-last-inspection, AND
- (6) Date and location of the inspection.

Alternative Methods of Compliance

(g) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Special Flight Permits

(h) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(i) The inspections must be done in accordance with GE ASB CF6-80C2 72-A1026, dated January 17, 2001. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from General Electric Company via Lockheed Martin Technology Services, 10525 Chester Road, Suite C, Cincinnati, Ohio 45215, telephone: (513) 672-8400, fax: (513) 672-8422. Copies may be examined at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date of this AD

(j) This amendment becomes effective on June 18, 2001.

FOR FURTHER INFORMATION CONTACT: Ann Mollica, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: (781) 238-7740, fax: (781) 238-7199.

Issued in Burlington, Massachusetts, on May 10, 2001.

Francis A. Favara, Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.